

Culture and Medicine

Immigrant women's health: Infectious diseases—Part 2

Parasites, diarrhea, and sexually transmitted infections

PARASITIC INFECTIONS

The examination of a stool specimen for ova and parasites is an important part of screening immigrant women; 3 sets of stool specimens substantially increase the yield. Intestinal parasites are exceedingly common among immigrants; in 1 group in Thailand, 79.3% of male and 94.7% of female workers had parasitic infections, most commonly hookworm and *Opisthorchis* species.¹ Common parasites in immigrant women include *Ascaris lumbricoides* (which is reported to infect more than a quarter of the world's population), hookworm, *Enterobius vermicularis* (pinworm), and *Trichuris trichiura* (whipworm). Hookworm is important to eradicate because it can cause significant anemia. Tapeworms, particularly *Taenia solium* (the agent of cysticercosis), are important parasites to detect and eradicate. Patients found to have *Entamoeba histolytica*, the agent of amebic dysentery and amebic liver abscess, should be treated, but several nonpathogenic amebae that may appear in stool specimens require no treatment.

Some parasitic infections, such as strongyloidiasis, may persist for long periods asymptotically. It is particularly important to screen immigrants who are going to be treated with immunosuppressive medications (for example, steroids for asthma), given the risk of disseminated strongyloidiasis in such patients.² The serologic test for *Strongyloides* species is more sensitive than stool examination. Schistosomiasis may persist long after the initial infection; evidence of *Schistosoma mansoni* eggs and specific IgE was found in 12% and 37%, respectively, of Israelis who had migrated from Yemen 38 years previously.³ If persistent schistosomiasis is detected, it is important to treat with praziquantel and to recheck stools to prevent late sequelae of portal hypertension. *Schistosoma haematobium* may produce long-term alterations of the bladder and ureters and may predispose to urinary tract infections, obstruction, and late bladder carcinoma. If it is suspected, *S haematobium* eggs should be sought in urine specimens. Past filariasis may produce lymphedema or elephantiasis of the extremities, with a predisposition to recurrent cellulitis.

An area of active research is the long-term activation of the immune system as a result of multiple parasitic infections. It has been hypothesized that this activation, especially an exaggerated helper T-cell subset 2 (T_H2) response, may have an effect on the course of human immunodeficiency virus (HIV) infection and concomitant immunopathologic disease.⁴

GASTROINTESTINAL AND DIARRHEAL DISEASES

Diarrheal disease is an important cause of morbidity and mortality in many parts of the world and may be present in epidemic form in refugee and holding camps. Bacterial agents include various strains of *Escherichia coli*, *Salmonella* and *Shigella* species (which may be multiply resistant), *Vibrio cholerae* (cholera), *Campylobacter* species, and others. Rotavirus and other viral causes of diarrhea occur worldwide. Parasitic causes such as amebiasis, giardiasis, capillariasis, and strongyloidiasis are important to detect and treat. Space does not allow here for detailed discussion of the different symptom complexes that suggest 1 cause or another, but the stool screening test for ova and parasites usually is performed for each immigrant. Sensitivity may be increased by obtaining 3 stool specimens when infection is suspected. Persons who are symptomatic may also require rehydration, specific antimicrobial therapy, bacterial stool cultures, or other evaluation.

Although not a diarrheal disease, *Salmonella typhi* (typhoid fever) is an important worldwide cause of febrile illness, and the chronic-carrier state may persist. A stool specimen should be obtained from prospective food handlers for culture for *Salmonella* species and other enteric bacterial pathogens.

HIV TYPES 1 AND 2

With the introduction of highly effective combination antiretroviral therapy, there is more reason than ever before to screen for HIV in asymptomatic persons. With trends in clinical practice emphasizing early reduction in viral load with the use of combination antiretroviral therapy to prevent later destruction of the immune system, there is now a compelling reason to do the test,⁵ if an immigrant has not already been tested as a condition of entry into the United States. In addition, testing affords the opportunity for the early administration of prophylaxis, such as for *Pneumocystis carinii* pneumonia in patients with CD4 counts of less than 200×10⁶/L (<200/μL) or other high-risk patients. Finally, testing a woman who is pregnant or of reproductive age allows for the initiation of therapy, which can drastically reduce the risk of transmission of HIV to the unborn child.^{6,7}

Ideally, HIV counseling should be given to everyone as part of basic health education. However, many cultural and psychosocial barriers to HIV testing and education in immigrants exist, among them fear of legal and immigration ramifications; fear of violence, abandonment, or re-

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prisals; and cultural and social stigmas.⁸⁻¹¹ These issues must be approached with great sensitivity and understanding, preferably in the immigrants' primary language and with peer educators. If time permits, it may be advisable to defer a discussion of HIV testing and transmission to a subsequent session after a clinician-patient relationship has been established.

Counseling before and after testing is essential. Consideration must be given to the availability of effective medication, ongoing primary care, and social service support. At an appropriate time, counseling on safer sex precautions, drug and needle transmission, and other educational issues should be addressed. Creative programs are being developed to increase accessibility and acceptance of such education.

West African and Cape Verdean patients may have been exposed to HIV type 2 (HIV-2); this may not show up on a standard HIV type 1 assay and should be specifically requested from the laboratory. Another retrovirus of importance in the Caribbean, Far East, and other areas is human T-lymphotropic virus 1 (HTLV-1), which can cause human T-cell lymphoma or leukemia or tropical spastic paraparesis. This is not routinely included in screening but may be appropriate in symptomatic patients from endemic areas.

SEXUALLY TRANSMITTED DISEASES

Serologic tests for syphilis are recommended because latent infection is common and appropriate therapy can prevent neurologic and cardiovascular complications, sexual transmission, and congenital syphilis.¹² It is important to detect concurrent HIV infection because syphilis in an HIV-infected patient may present as early neurologic complications or unexpected relapse. Clinicians also should keep in



Parasites under the skin: foot of a woman showing cutaneous larva migrans

Dr P. Marazzi/Science Photo Library

mind that a positive serologic test result may be due to other treponemal diseases such as yaws, pinta, and bejel.¹³

Gonorrhea and chlamydia are important causes of pelvic inflammatory disease and consequent infertility, tubal disease, and other complications. A pelvic examination should identify symptomatic persons, but chlamydial infection, in particular, may be asymptomatic. Considerable research has gone into defining the cost-effectiveness of screening and empiric therapy for chlamydial infection in asymptomatic populations, and screening is recommended in sexually active adolescents and young women aged 20 to 24 years.¹²

Chancroid and lymphogranuloma venereum are common in certain parts of the world and should be evident on physical examination. Diseases that cause genital ulcers, such as chancroid, are important cofactors in HIV transmission and should be vigorously treated. Genital herpes may be symptomatic or asymptomatic, and treatment and counseling should follow the standard practice of sexually transmitted disease clinics.¹²

SPECIAL CONSIDERATIONS: PREGNANCY, IMMUNOSUPPRESSION, TRANSFUSION, AND RHEUMATIC FEVER

For a more detailed discussion of issues of pregnancy, immunosuppression, transfusion, rheumatic fever, and other topics regarding immigrant health, readers are referred to Wilson's comprehensive work, *A World Guide to Infections*.¹³

With pregnant or possibly pregnant women, particular attention should be paid to the possible presence of HIV, hepatitis B virus, and syphilis because the risk of transmission to the fetus can be greatly reduced with appropriate therapy. Certain infections such as malaria can be extremely severe in a pregnant patient, and febrile illness is of great concern. Chronic infections such as Hansen's disease may worsen during pregnancy.

When immunosuppressive medications such as corticosteroids are to be administered, it is important to rule out tuberculosis and strongyloidiasis because of the risk that these infections will become disseminated or over-



The legs of a woman with severe lymphatic filariasis (elephantiasis)

R. Umesh Chandran, TDR, WHO/Science Photo Library

whelming with immunosuppression.² Three stool specimens for ova and parasites may not be adequate to detect *Strongyloides* species. In high-risk patients, consideration should be given to a serologic test or an empiric course of thiabendazole or ivermectin to eradicate this parasite before giving steroids.

Blood donation for transfusion is not permitted for a person who has been in a malaria-endemic area in the preceding 12 months—or 3 years if prophylaxis was used. In any prospective blood donor, the potentially transmissible agents to consider include HIV, HTLV-1, hepatitis B and C viruses, cytomegalovirus, Chagas' disease, and malaria.^{13,14} Testing for the first 4 of these is routinely performed; in addition, Wilson recommends serologic testing for Chagas' disease in any prospective blood donor who has lived in endemic areas of Central or South America.¹³ Also, heightened awareness of the possible presence of those diseases is important for patients who have received transfusions before entering the United States.

Finally, in developing countries, the cardiac sequelae of rheumatic fever may appear at an early age.¹⁵ Young adults and adolescents with valvular abnormalities are at ongoing risk for endocarditis and should have a thorough dental evaluation and extractions as indicated. Those at risk for endocarditis should be educated about the importance of antibiotic prophylaxis for dental, gastrointestinal tract, and genitourinary tract procedures.

CROSS-CULTURAL CONSIDERATIONS

Cross-cultural considerations have bearing on infectious disease screening in that acute or chronic problems may be undetected or misdiagnosed if the clinician is unaware of certain cultural practices. For example, the medicinal use of capsules of dried rattlesnake flesh for a variety of ailments in Mexico and Central America can cause infection with *Salmonella arizonae*.¹³ Another example is cutting of the uvula for sore throat, tooth extraction for infants with diarrhea, and many other health practices in Ethiopian immigrants.⁹ Uvulectomy by traditional healers occurs in many other areas in Africa as well.¹⁶ The wording of questions is important. When 1 patient was asked about eating undercooked meat, she denied this but did not connect this question with the raw meat that she regularly ate and that likely caused her toxoplasmosis (S Schmitt, oral communication, 1998).

The screening process, as well as diagnoses and proposed treatments, should be explained in a culturally sensitive manner. Acceptance of therapy will depend on the way in which it is explained, offered, and followed. Whenever possible, directly observed therapy can greatly increase adherence and prevent confusion and medication errors. In addition, clinicians should be aware of the availability of short-course or simplified therapies for common endemic

diseases. An effective example is single-dose azithromycin treatment for trachoma, which replaces the previous 6-week course of topical or oral tetracycline.¹⁷ Similarly, single-dose azithromycin is effective for the treatment of chlamydial infection and chancroid.¹²

CONCLUSIONS

The diagnosis and prevention of infectious diseases are important not only to the care of individual immigrants but also to the health of the family, future children, and the community as a whole. Because the screening process and discussion of the individual infections can be a confusing and frightening experience, the screening should be conducted in a welcoming and sensitive manner and should be seen as an opportunity to convey important messages about health education and prevention. Ideally, the screening process will lead directly to a primary care relationship, but even if this is not possible, the manner in which it is conducted will set the tone for the interaction of the new immigrant with the health care system.

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